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EXAMINER	
SETH, MANAV	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/034,288	BACHELDER, IVAN	
	Examiner	Art Unit	
	Manav Seth	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed 17 February 2005 has been entered in full.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 1, 2, 5-7 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hannan, U.S. Patent No. 4,404,594 and further in view of Frost et al, U.S. Patent No. 5,647,025.

Claim 1 recites "a method for generating a focused image of an object comprising: acquiring an image of an object, the image having at least one region". Hannan discloses of obtaining an image sample from each of a plurality of portions of the images in lines 25–30 of column 2.

Claim 1 further recites "performing a fine feature sharpness measurement on the at least one region of the image to provide a sharpness score". Hannan discloses of performing fine feature measurement to determine a sharp focus in lines 1 - 12 of column 3.

Claim 1 further recites "determining a spatial weighting using the sharpness score". A person using a camera or microscope can determine the optimal or sharp focus by looking at the focused image and then based on his/her capability of viewing image appropriate sharpness or focusing can be selected. But the same problem of obtaining a focused image using an image processing system or a computer system is totally different. A computer system cannot determine the optimal or sharp focus by just looking at the focused image as done by a human operator, but it has to perform some calculations or weighting on the images by considering image characteristics to determine the best focus. As discussed before, Hannan performs fine feature measurement to determine a sharpness focus score of image portion (col. 3, lines 1-12) but Hannan further discloses that it is desirable ***to pick the image sample having the best focus for each portion of the image***, so that a complete image comprised of optimally focused image elements can be formed (col. 4, lines 1-5). It is apparent from the above disclosure that Hannan determines the sharpness for the entire sub-image but picks the image sample for each portion of the image having the best focus where **assigning the best focus to the image sample using sharpness score is spatial weighting of the image sample** done by the system, and when computing a composite image, the image samples selected using spatial weighting are combined which gives the total maximum sharpness score of the image. Hannan does not specifically teach the claimed specific term of determining spatial weighting as part of the focus determination. Spatial weighting of the image based on the sharpness score is well known technique to determine a best focused image, and this well known spatial

weighting specifics are further taught by Frost, to further provide the support to this well known technique. Frost determines a sharpness score and uses the sharpness score to determine the spatial weighting and further determines the optimal focus of the image regions using the spatial weighting (col. 8, lines 5-67). Frost further discloses combining of all successful focused scans to generate a model of the focused surface of the object to obtain an optimal focus setting to attain an optimal focused image (col. 14, lines 40-47). It is apparent from the above disclosure that it would be obvious for one of ordinary skill in the art to first obtain an optimal focus setting to obtain an optimal focused image. Therefore, it would have been obvious to one having the ordinary skill in the art at the time of the invention was made, to use the teachings of determining spatial weighting using sharpness score as taught by Frost for defining the claimed specifics of obtaining the optimal focused image in the invention of Hannan. One would have been motivated to use the teachings of determining spatial weighting using sharpness score as taught by Frost for defining the claimed specifics of obtaining the optimal focused image in the invention of Hannan because both references are directed to obtaining optimal focused image and Frost further provides the specifics of obtaining optimal focused image based on spatial weighting of which Hannan does not provide the specifics. Frost provides a method for automatically focusing on biological specimens, and more particularly to a microscope auto-focus system which automatically focuses on features, patterns, or specific types of objects to automatically identify objects of interest from a set of images collected from different focal depths and automatically selects the focal depth which corresponds to best focus on the objects of interests (col. 2, lines 1-5). Frost like

Hannan talks about using image spatial properties such as brightness, texture (high frequency components) to select the focal depth (col. 2, lines 5-7). Both references are based on the same principle of auto focusing to determine the best focus of the image and therefore it would have been obvious to one of ordinary skill in the art to combine both references for better detailed specifics of generating a focused image. Further, Frost provides a process to bring into best focus only the objects of interest without the need to focus independently on each object of interest (column 2, lines 11 – 14).

Claim 1 further recites "computing a composite image using the at least one region of the image and spatial weighting". Hannan discloses obtaining a composite image by combining each of the optimally focused image portions in lines 1- 4 of column 4.

Claim 2 recites "the method of claim 1 wherein the focus feature sharpness measurement is performed on each of a plurality of regions, each such region corresponding to a location on the object". Claim 2 has been analyzed and is rejected as per claim 1 and in further consideration to Hannan (column 2, lines 17-30).

Claim 5 recites " the method of claim 1 wherein the fine feature sharpness measurement further comprises: transforming the at least one region of the image so as to provide a plurality of spatial frequencies of the at least one region of the image; measuring a density of high spatial frequencies; and using the density of high spatial frequencies so as to provide a fine feature sharpness measurement". Hannan discloses

using of high pass filter for blocking low-frequency portion of the image portion output and passing the high-frequency portions which represents the high spatial frequency detail necessary for sharp focus (fine feature sharpness measurement (Column 2, lines 1-12). It is clear from Hannan that an image comprises of both low spatial frequency and high spatial frequency details and such a frequency distribution of an image is an inherent property of an image and high frequency data represents edge and details of an image.

Claim 6 recites "providing a plurality of images of the object, each image having a focus setting". Frost discloses a focus measurement for each of the images and where each focus measurement is a function of at least on image measurement (column 2, lines 26-31).

Claim 6 recites "providing at least one image region in at least one image". As discussed in the rejection of claim 1, Hannan picks up the image sample form the region of the image. Frost discloses of dividing each **field of view** into smaller portions (column 7, lines 40 – 46) and figures 2A and 2B. Therefore, this limitation of claim 6 has been similarly analyzed and rejected as per claims 1 and 2.

Claim 6 recites "measuring sharpness score of a portion of the at least one image corresponding to the at least one image region". As discussed above in the rejection of claim 1, Hannan performs fine feature measurement to determine the sharpness score for at one image region. Also, Frost discloses determining the sharpness for each of the smaller portions of the **field of view** (column 8, lines 30 – 42).

Claim 6 recites "determining a spatial weighting for the portion of the at least one image using the sharpness score". As discussed in the rejection of claim 1, Frost discloses of assigning spatial weights to each portion using the sharpness score (column 8, lines 50 - 59). Therefore, this limitation of claim 6 has been similarly analyzed and rejected as per claim 1.

Claim 6 recites "generating a focused image using the portion of the at least one image and the spatial weighting". This limitation of claim 6 has been similarly analyzed and rejected as per claim 1.

Claim 7 recites " the method of claim 6 wherein the step of providing at least one image region in at least one image further comprises: determining a set of focus regions on the surface of the object; and aligning at least one focus region in at least one image". Frost discloses of identifying objects of interest from a set of images collected from different focal lengths, which satisfy the limitation "determining a set of focus regions on the surface of the object" (column 2, lines 1-3). Frost in continuation also disclose "a method to bring into best focus only the objects of interest in a full field of view" (column 2, lines 11-14) and " a focus measure is computed for each of the images, where each focus measure is a function of at least one image measurement" (column 2, lines 26-29) which satisfy the limitation "aligning at least one focus region in at least one image".

Claim 12 recites "the method of claim 6 wherein the at least one image region comprises a greyscale image map". Frost discloses "a histogram is computed of the gray levels of the image" (column 7, lines 21-23 and lines 46-50).

Claim 13 recites " the method of claim 6 wherein the step of providing a plurality of images further comprises: determining a coarse focus position". Frost discloses of computing an initial focus scan to determine the best focus (coarse focus) position and this process continues incrementally until a best focus position is achieved (column 9, lines 1-10 and lines 20-27). Each time the initial focus scan is performed a plurality of images are acquired (column 6, lines 11 – 14 and lines 65 - 66).

Claim 14 has been similarly analyzed and is rejected as per claim 13.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hannan, U.S. Patent No. 4,404,594 and further in view of Frost et al, U.S. Patent No. 5,647,025 and further in view of Toriumi et al, U.S. Patent No. 4,616,262.

Claim 3 recites "the method of claim 1 wherein the step of computing a composite image comprises a weighted average using the at least one region of the image and the spatial weighting". Hannan in combination with Frost discloses of computing a composite image using at least one region of the image and the spatial weighting as analyzed in rejection for claims 1 and 2 but are silent to the specific

process of computing a composite image by determining a weighted average using the at least one region of the image and the spatial weighting.

However, Toriumi discloses determining of spatial weighting for the images to be combined (column 5, lines 39-45), and further combining the images by performing density conversion (weighted average) using the image information (spatial weighting score) (figures 6 and 11;col. 4; lines 48-51). Toriumi further discloses "**a combined image in which the portion in the vicinity of the interface is gradated** can be obtained" (col. 8, lines 60-62). It is clear from the above disclosure that density conversion is a gradation (weighting) of the pixels of the image so that pixels belong to a continuous range of sharpness. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made, to combine the combined invention of Hannan and Frost as discussed earlier with that of Toriumi. One would have been motivated to add to the combined invention of Hannan and Frost the step of computing the composite image by computing a weighted average using the spatial weighting score from Toriumi because **the combined invention of Hannan and Frost** and the invention of Toriumi are directed to the generation of composite image and Toriumi provides the specifics of generating composite (combined) image by implementing the weighted average (gradation) using the spatial weights of the images to be combined. Further, the process of Toriumi will further provide a way to correct the pixel density at the interface of the combined images and **provide for a smoother transition at the interface of the images to be combined** (col. 2, lines 5-11). It is well known in the art and obvious to one of ordinary skill that when two images are

combined to form one image, two images are processed at the interface so that there is a smooth transition at the interface so that it looks like one image only and Toriumi as explained before provides that feature.

Claim 4 recites "the method of claim 3 wherein the weighted average is an incremental weighted average". Weighted average has been analyzed in the rejection of claim 3 and same analysis with additional argument as disclosed below, are applied to the rejection of claim 4. Toriumi discloses the incremental weighted average used at the interface to combine the images in figures 23 and 25 and in lines 43-50 of column 6.

5. Claims 8, 9, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hannan, U.S. Patent No. 4,404,594, further in view of Frost et al, U.S. Patent No. 5,647,025 and further in view of Kubota et al, IEEE Publication, 2000, "Inverse filters for reconstruction of arbitrarily focused images from two differently focused images".

Regarding claims 8, 9, 10 and 11, both Hannan and Frost fails to disclose the use of fuzzy transition such as Gaussian, when one image region overlaps an adjacent image region. However, in the same field of the invention, Kubota discloses that when at least one region (foreground) overlaps another adjacent region (background) the overlapping results in blurring (fuzziness) which is a Gaussian function (in the left column of page 2). Further, **applicant has admitted in the specification (page 18, line 1- 6) that this is well known in the art of image processing field.** Therefore, it

would have been obvious that one would have been motivated to incorporate the teaching of Kubota into the method of Frost for the purpose of generating an all-focused image in which both adjacent images are in focus because of the conventionality of this type of transition and because this will make the adjacent image portions to blend together and not be distracting to the viewer and, additionally, because the applicant has acknowledged that this is a well known procedure (page 18 of the specification).

6. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hannan, U.S. Patent No. 4,404,594 and further in view of Frost et al, U.S. Patent No. 5,647,025 and in further view of Palmquist et al., U.S. Patent No. 5,179,419.

Claim 15 recites "the method of claim 7 wherein the object is a fiber optic cable end face". Both Hannan and Frost does not teach of generating a focused image of a fiber optic cable end face. However, Palmquist discloses the methods of detecting defects in optical fiber end faces. Palmquist same as Hannan and Frost is also directed to the determination of optimum focal position (column 3, lines 30-40) by acquiring a plurality of images (column 6, lines 42-45) and performing a sharpness measurement (column 6, lines 62-65) on each of the image portions but the image portion belongs to a fiber optic cable end face. Palmquist same as Frost determines the coarse focus position and comprises of grayscale image map for each image (column 8, lines 1-4). Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention was made to use the combined method of Hannan and Frost in generating a focused image of a fiber optic cable end face as done by Palmquist because Frost

provides a method for automatically focusing on biological specimens, and more particularly to a microscope auto-focus system which automatically focuses on features, patterns, or specific types of objects to automatically identify objects of interest from a set of images collected from different focal depths and automatically selects the focal depth which corresponds to best focus on the objects of interests (col. 2, lines 1-5). Optical fibers, as known, are very micro-sized such as biological specimens and in order to obtain the best focused composite image of the optical fiber surface, a microscopic image taking system is required and which is provided by the combined invention of Hannan and Frost. Therefore, one of ordinary skill in the art would be motivated to use the combined invention of Hannan and Frost to obtain the best focused composite image of the optical fiber surface by the use spatial weighting.

Claim 16 recites "the method of claim 15 wherein the set of regions are annular". Frost discloses a spiral pattern formation around the original starting focus point when determining a set of focus regions on the surface of the object.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 6, 7, 12, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Frost et al, U.S. Patent No. 5,647,025.

Claim 6 recites "providing a plurality of images of the object, each image having a focus setting". Frost discloses a focus measurement for each of the images and where each focus measurement is a function of at least on image measurement (column 2, lines 26-31).

Claim 6 recites "providing at least one image region in at least one image". Frost discloses of dividing each **field of view** into smaller portions (column 7, lines 40 – 46) and figures 2A and 2B.

Claim 6 recites "measuring sharpness score of a portion of the at least one image corresponding to the at least one image region". Frost discloses determining the sharpness for each of the smaller portions of the **field of view** (column 8, lines 30 – 42).

Claim 6 recites "determining a spatial weighting for the portion of the at least one image using the sharpness score". Frost discloses of assigning spatial weights to each portion using the sharpness score (column 8, lines 50 - 59).

Claim 6 recites "generating a focused image using the portion of the at least one image and the spatial weighting". Frost discloses of generating a best-focused image using the spatial weighting (column 8, lines 60 - 67) and (column 9, lines 1 - 2).

Claim 7 recites " the method of claim 6 wherein the step of providing at least one image region in at least one image further comprises: determining a set of focus regions on the surface of the object; and aligning at least one focus region in at least one

image". Frost discloses of identifying objects of interest from a set of images collected from different focal lengths, which satisfy the limitation "determining a set of focus regions on the surface of the object" (column 2, lines 1-3). Frost in continuation also disclose "a method to bring into best focus only the objects of interest in a full field of view" (column 2, lines 11-14) and " a focus measure is computed for each of the images, where each focus measure is a function of at least one image measurement" (column 2, lines 26-29) which satisfy the limitation "aligning at least one focus region in at least one image".

Claim 12 recites "the method of claim 6 wherein the at least one image region comprises a greyscale image map". Frost discloses "a histogram is computed of the gray levels of the image" (column 7, lines 21-23 and lines 46-50).

Claim 13 recites " the method of claim 6 wherein the step of providing a plurality of images further comprises: determining a coarse focus position". Frost discloses of computing an initial focus scan to determine the best focus (coarse focus) position and this process continues incrementally until a best focus position is achieved (column 9, lines 1-10 and lines 20-27). Each time the initial focus scan is performed a plurality of images are acquired (column 6, lines 11 – 14 and lines 65 - 66).

Claim 14 has been analyzed and is rejected as per claim 13.

Response to Arguments

9. Applicant's arguments regarding the prior art rejections under Hannan and Frost on page 3 of 9 and 4 of 9 of the Amendment filed on 17 February 2005 have been fully considered but they are not persuasive.

10. In the 2nd paragraph on page 4 of 9 of the Amendment, Applicant argues in substance:

a. The combined teachings of Hannan and Frost do not support a basis for rejection under USC 103(a) because there is no motivation to combine or modify the references.

The Examiner respectfully disagrees. All supporting arguments have been explained in detail in the rejection of claim 1.

b. Hannan does not need to consider spatial weighting for its sharpness measurements since it uses the sharpness measurement for the entire sub-image.

The Examiner respectfully disagrees. A person using a camera or microscope can determine the optimal or sharp focus by looking at the focused image and then based on his/her capability of viewing image appropriate sharpness or focusing can be selected. But the same problem of obtaining a focused image using an image processing system or a computer system is totally different. A computer system cannot determine the optimal or sharp focus by just looking at the focused image as done by a human operator, but it has to perform some calculations or weighting on the images by

considering image characteristics to determine the best focus. As discussed before, Hannan performs fine feature measurement to determine a sharpness focus score of image portion (col. 3, lines 1-12) but Hannan further discloses that it is desirable ***to pick the image sample having the best focus for each portion of the image***, so that a complete image comprised of optimally focused image elements can be formed (col. 4, lines 1-5). It is apparent from the above disclosure that Hannan determines the sharpness for the entire sub-image but picks the image sample for each portion of the image having the best focus where **assigning the best focus to the image sample using sharpness score is spatial weighting of the image sample** done by the system, and when computing a composite image, the image samples selected using spatial weighting are combined which gives the total maximum sharpness score of the image. Hannan does not specifically teach the claimed specific term of determining spatial weighting as part of the focus determination. All other supporting arguments have been explained in the rejection of claim 1.

11. Applicant's arguments regarding the prior art rejections under Hannan, Frost and Toriumi on page 5 of 9 of the Amendment filed on 17 February 2005 have been fully considered but they are not persuasive.

12. In the 5th paragraph on page 5 of 9 of the Amendment, Applicant argues in substance:

a. <u>There is nothing in any Hannan, Frost or Toriumi that would suggest that any of the references can be combined to render the subject matter of the Applicant's claims 3 and 4 obvious to one of ordinary skill in the art.</u>

The Examiner respectfully disagrees. Hannan clearly says that selected image samples can be combined to form a complete focused image. It is well known in the art and probably obvious to one of ordinary skill that when two images are combined to form one focused image, two images are processed at the interface so that there is a smooth transition at the interface so that it looks like one image only and the main idea of Hannan as explained before is **obtaining one focused composite image**, which would be impossible when the interface shows a boundary which makes it two or more different images connected together. Keeping in view of combining plurality of images of the same object so that one good composite image of the same object is obtained Toriumi is brought in for further support for combining. Toriumi as explained before in the rejection of claim 3 discloses "**a combined image in which the portion in the vicinity of the interface is gradated** can be obtained" (col. 8, lines 60-62). All other supporting arguments have been explained in the rejection of claim 3 and 4.

13. Applicant's arguments regarding the prior art rejections under Frost and Kubota on page 6 of 9 of the Amendment filed on 17 February 2005 have been fully considered and are persuasive.

14. In the 2nd paragraph on page 6 of 9 of the Amendment, Applicant argues in substance:

a. ***Since Frost does not teach or suggest the generation of a composite image, the image region reconstruction teachings of Kubota are not useful to one skilled in the art.***

Examiner respectfully agrees. Claims 8, 9,10 and 11 have been re-examined and rejected under USC 103 (a) as being unpatentable over Hannan in view of Frost and further in view of Kubota.

15. Applicant's arguments regarding the prior art rejections under Frost and Palmquist on page 7 of 9 of the Amendment filed on 17 February 2005 have been fully considered and are persuasive.

16. Claims 15 and 16 have been reexamined and rejected under USC 103 (a) as being unpatentable over Hannan in view of Frost and further in view of Palmquist.

17. Applicant's arguments regarding the prior art rejections of claims 6, 7, 12, 13, and 14 under Frost on page 7 of 9 of the Amendment filed on 17 February 2005 have been fully considered but are not persuasive.

18. In the 4th paragraph on page 7 of 9 of the Amendment, Applicant argues in substance:

a. Frost computes a spatial weighting from a focus score for images of regions of the object, each of the plurality of images – but the reference fails to teach or suggest the steps of "generating a focused image using the portion of the at least one image and the spatial weighting," as claimed by applicant.

Examiner respectfully disagrees that Frost fails to teach or suggest the steps of generating a focused image using the portion of the at least one image and the spatial weighting. Frost clearly teaches "A best focus location is determined relative to a focal depth where an acquired image has a highest focus measure" (col. 2, lines 29-30). It is clear from this disclosure that spatial weighting is used to determine a best focus depth position to acquire an image that has a highest focus measure. It is apparent from the above disclosure that it would be obvious for one of ordinary skill in the art to first obtain an optimal focus setting to obtain an optimal focused image. Also as recited in claim 6, the limitation "generating a focused image using the portion of the at least one image and the spatial weighting" does not indicate that a composite image is required. Examiner asserts that one of ordinary skill can generate a focused image just by focusing on one image portion and spatial weighting it without requiring other image portions. Therefore, claims 6-7 and 12-14 still stand the rejection under USC 102(b).

However, claims 6-7 and 12-14 have also been rejected under USC 103(a) as being unpatentable over Hannan in further view of Frost, keeping in view of claims 8-11.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manav Seth whose telephone number is (571) 272-7456. The examiner can normally be reached on Monday to Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's trainer, Joseph Mancuso, can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

Manav Seth
Art Unit 2625
April 25, 2005

JOSEPH MANCUSO
SUPERVISORY EXAMINER